

BUREAU OF INDIAN STANDARDS

Program of Work

ETD 21 : Electric Welding Equipment

Scope: To prepare standards on the construction, performance, testing and safety requirements for electric welding equipment and accessories for both arc and resistance type

Liaison: **IEC TC-26 (O):** *Electric welding*

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 13339 : 1992 <i>Reviewed In : 2017</i> BS 635 : 1979, iec doc 16 central office 19-1-11	Multi - Operator type arc welding transformers - Specification	September, 2017	-	Modified/Technically Equivalent
2	IS 16593 (Part 1) : 2024 60974-1:2021 <i>60974-1:2021</i>	Arc Welding Equipment Part 1: Welding Power Sources		-	Identical under dual numbering
3	IS 16593 : 2021 IEC 60974-1 : 2017 <i>60974-1:2021</i>	Arc welding equipment: Part 1 Welding power source		-	Identical under dual numbering
4	IS 16593 (Part 2) : 2023 IEC 60974-2 : 2019 <i>IEC 60974-2 : 2019</i>	Arc Welding Equipment Part 2: Liquid Cooling Systems (First Revision)		-	Identical under dual numbering
5	IS 16593 (Part 3) : 2023 IEC 60974-3: 2019 <i>IEC 60974-3: 2019</i>	Arc welding equipment Part 3: Arc striking and stabilizing devices (First Revision)		-	Identical under dual numbering
6	IS 16593 (Part 4) : 2022 IEC 60974-4 : 2016 <i>IEC 60974-4 : 2016</i>	Arc welding equipment: Part 4 Periodic inspection and testing		-	Identical under dual numbering
7	IS 16593 (Part 5) : 2023 IEC 60974-5 : 2019 <i>IEC 60974-5 : 2019</i>	Arc welding equipment Part 5: Wire feeders (First Revision)		-	Identical under dual numbering
8	IS 16593 (Part 6) : 2022 IEC 60974-6 : 2015 <i>IEC 60974-6 : 2015</i>	Arc welding equipment: Part 6 Limited duty equipment		-	Identical under dual numbering
9	IS 16593 (Part 7) : 2022 IEC 60974-7 : 2019 <i>IEC 60974-7 : 2019</i>	Arc welding equipment - Part 7 : Torches		-	Identical under dual numbering
10	IS 16593 (Part 8) : 2023	Arc welding equipment Part 8: Gas consoles for welding and plasma		-	Identical under dual numbering

	IEC 60974-8: 2021 IEC 60974-8: 2021	cutting systems (First Revision)			
11	IS 16593 (Part 9) : 2021 IEC 60974-9 : 2018 IEC 60974-9 : 2018	Arc welding equipment: Part 9 Installation and use		-	Identical under dual numbering
12	IS 16593 (Part 10) : 2023 IEC 60974-10 : 2020 IEC 60974-10 : 2020	Arc welding equipment Part 10: Electromagnetic compatibility EMC requirements (First Revision)		-	Identical under dual numbering
13	IS 16593 (Part 11) : 2023 IEC 60974-11 : 2021 IEC 60974-11 : 2021	Arc welding equipment Part 11: Electrode holders		-	Identical under dual numbering
14	IS 16593 (Part 12) : 2024 60974-12:2022 60974-12:2022	Arc Welding Equipment Part 12 Coupling Devices for Welding Cables (First Revision)		-	Identical under dual numbering
15	IS 16593 : 2022 IEC 60974-12 : 2011 60974-12:2022	Arc welding equipment: Part 12 Coupling devices for welding cables		-	Identical under dual numbering
16	IS 16593 (Part 13) : 2022 IEC 60974-13 : 2021 IEC 60974-13 : 2021	Arc welding equipment Part 13: Welding current return clamp		-	Identical under dual numbering
17	IS 16593 (Part 14) : 2024 60974-14:2018 60974-14:2018	Arc welding equipment Part 14: Calibration validation and consistency testing		-	Identical under dual numbering
18	IS 17816 (Part 1) : 2022 IEC 62135-1 : 2015 IEC 62135-1 : 2015	Resistance welding equipment: Part 1 Safety requirements for design manufacture and installation		-	Identical under dual numbering
19	IS 17816 (Part 2) : 2022 IEC 62135-2 : 2020 IEC 62135-2 : 2020	Resistance welding equipment Part 2: Electromagnetic compatibility EMC requirements		-	Identical under dual numbering
20	IS 18483 (Part 1) : 2024 62822-1:2016 62822-1:2016	Electric welding equipment Assessment of restrictions related to human exposure to electromagnetic fields 0 Hz to 300 GHz Part 1: Product family standard		-	Identical under dual numbering
21	IS 1851 : 1997 ISO 700 Reviewed In : 2017 ISO 700 : 1982, BS 638 (Part 10) : 1990	Single operator type arc welding transformers - Specification	March, 2017	-	Modified/Technically Equivalent
22	IS 2635 : 1997 Reviewed In : 2022 ISO 700 : 1982, BS 638 (Part 10) : 1990	DC electric welding generators - Specification (Third Revision)	March, 2022	-	Modified/Technically Equivalent
23	IS 2641 : 1989 Reviewed In : 2020 BS 638 : 1984 IEC Document 26	Electric welding accessories - Specification (First Revision)	July, 2020	-	Modified/Technically Equivalent

	(Secretariat) 36 : 1981 Draft				
24	IS 4559 : 1993 ISO 700 Reviewed In : 2019 ISO 700:1982	Single operator rectifier type dc arc welding power source - Specification (Second Revision)		-	Modified/Technically Equivalent
25	IS 4804 (Part 1) : 1968 Reviewed In : 2020 Draft ISO Recommendation No. 974, B.S. 3065-1959, Bull. No. 16. 1966.	Specification for resistance welding equipment: Part 1 single - Phase transformers	July, 2020	-	Modified/Technically Equivalent
26	IS 4804 (Part 2) : 1968 Reviewed In : 2020	Specification for resistance welding equipment: Part 2 single - Phase rocker - Arm spot welding machines	July, 2020	1	Indigenous
27	IS 4804 (Part 3) : 1969 Reviewed In : 2020	Specification for resistance welding equipment: Part 3 single - Phase spot and projection welding machines	July, 2020	1	Indigenous
28	IS 4804 (Part 4) : 1973 Reviewed In : 2020	Specification for resistance welding equipment: Part 4 single phase stationary, press type roll - Spot and seam welding machines	July, 2020	-	Indigenous
29	IS 6008 : 1989 ISO 700:1082 Reviewed In : 2019 a) ISO 700-1982 Power sources for manual metal arc welding with covered electrodes and for the TIG	Arc welding power source, single operator rectifier type, AC and DC - Specification (First Revision)		-	Modified/Technically Equivalent
30	IS 7931 (Part 1) : 1975 Reviewed In : 2019 ISO Dot TA-76/ 72/ E , Document No. 7 I/ 42369 , NEMA EW-I-1971	Specification for automatic and semi - Automatic welding equipment with self - Adjusting arcs (Migimag Processes): Part 1 DC welding generator power source		-	Modified/Technically Equivalent
31	IS 7931 (Part 2) : 1975 Reviewed In : 2019 ISO Dot TA-76/ 72/ E , Document No. 7 I/ 42369 , NEMA EW-I-1971	Specification for automatic and semi - Automatic welding equipment with self-adjusting arcs (Mig/mag Processes): Part 2 transformer - Rectifier power source		1	Modified/Technically Equivalent
32	IS 7931 (Part 3) : 1975 Reviewed In : 2019 ISO Dot TA-76/ 72/ E , Document No. 7 I/ 42369 , NEMA EW-I-1971	Specification for automatic and semi - Automatic welding equipment with self - Adjusting arcs (Mig/mag Processes): Part 3 welding gun and ancillary equipment		1	Modified/Technically Equivalent
33	IS 8804 : 1993 IEC 501 Reviewed In : 2019	Plugs, sockets, terminal arrangements and welding cable connectors for manual welding		-	Modified/Technically Equivalent

	IEC Publication 501 (1975) , BS 638 : 1966	equipment - Specification (First Revision)			
34	IS 9604 : 1994 Reviewed In : 2019 Dot : ISO/TC 44.%X (Secretariat -20 1975	Tungsten - Inertgas (Tig) welding equipment - Specification (First Revision)		-	Modified/Technically Equivalent

Standards under Development

Projects Approved		
SI. No.	Doc No.	Title
<i>No Records Found</i>		

Preliminary Draft Standards		
SI. No.	Doc No.	Title
<i>No Records Found</i>		

Drafts Standards in WC Stage		
SI. No.	Doc No.	Title
<i>No Records Found</i>		

Draft Standards Completed WC Stage		
SI. No.	Doc No.	Title
1	ETD 21 (23999)	Electric welding equipment Assessment of restrictions related to human Exposure to electromagnetic fields 0 Hz to 300 GHz Part 3 Resistance welding equipment

Finalized Draft Indian Standard		
SI. No.	Doc No.	Title
<i>No Records Found</i>		

Finalized Draft Indian Standards under Print		
SI. No.	Doc No.	Title
1	ETD 21 (22540)	Electric welding equipment Assessment of restrictions related to human Exposure to electromagnetic fields 0 Hz to 300 GHz Part 2 Arc welding equipment

Total Published Standards:30 Total Standards Under development:2

Aspect Wise Report

Product : 20
Code of Practices : 4
Methods of Test : 1
Terminology : 0
Dimensions : 0
System Standard : 0
Safety Standard : 0
Others : 7
Service Specification : 0
Process Specification : 0
Unclassified : 0

Annexure-I :List of Indian Standards Withdrawn/Superseded

SI. No.	IS No. & Year	Title
<i>No Records Found</i>		

Annexure-II :List of Indian Product Standards

SI. No.	IS No. & Year	Title
1	IS 13339 : 1992 <i>Reviewed In : 2017</i> BS 635 : 1979, iec doc 16 central office 19-1-11	Multi - Operator type arc welding transformers - Specification
2	IS 16593 (Part 1) : 2024 60974-1:2021	Arc Welding Equipment Part 1 Welding Power Sources
3	IS 16593 (Part 6) : 2022 IEC 60974-6 : 2015 ISO/TS 20224-5:2020	Arc welding equipment Part 6 Limited duty equipment
4	IS 16593 (Part 7) : 2022 IEC 60974-7 : 2019	Arc welding equipment - Part 7 Torches
5	IS 16593 (Part 12) : 2024 60974-12:2022	Arc Welding Equipment Part 12 Coupling Devices for Welding Cables First Revision
6	IS 17816 (Part 1) : 2022 IEC 62135-1 : 2015 ISO 3377-1:2011	Resistance welding equipment Part 1 Safety requirements for design manufacture and installation
7	IS 1851 : 1997 ISO 700 <i>Reviewed In : 2017</i> ISO 700 : 1982, BS 638 (Part 10) : 1990	Single operator type arc welding transformers - Specification
8	IS 2635 : 1997 <i>Reviewed In : 2022</i> ISO 700 : 1982, BS 638 (Part 10) : 1990	DC electric welding generators - Specification Third Revision
9	IS 2641 : 1989 <i>Reviewed In : 2020</i> BS 638 : 1984 IEC Document 26 (Secretariat) 36 : 1981 Draft	Electric welding accessories - Specification First Revision
10	IS 4559 : 1993 ISO 700 <i>Reviewed In : 2019</i> ISO 700:1982	Single operator rectifier type dc arc welding power source - Specification Second Revision
11	IS 4804 (Part 1) : 1968 <i>Reviewed In : 2020</i> Draft ISO Recommendation No. 974, B.S. 3065-1959, Bull. No. 16. 1966.	Specification for resistance welding equipment Part 1 single - Phase transformers
12	IS 4804 (Part 2) : 1968 <i>Reviewed In : 2020</i>	Specification for resistance welding equipment Part 2 single - Phase rocker - Arm spot welding machines
13	IS 4804 (Part 3) : 1969 <i>Reviewed In : 2020</i>	Specification for resistance welding equipment Part 3 single - Phase spot and projection welding machines
14	IS 4804 (Part 4) : 1973 <i>Reviewed In : 2020</i>	Specification for resistance welding equipment Part 4 single phase stationary press type roll - Spot and seam welding machines
15	IS 6008 : 1989 ISO 700:1082 <i>Reviewed In : 2019</i> a) ISO 700-1982 Power sources for	Arc welding power source single operator rectifier type AC and DC - Specification First Revision

	manual metal arc welding with covered electrodes and for the TIG	
16	IS 7931 (Part 1) : 1975 Reviewed In : 2019 ISO Dot TA-76/ 72/ E , Document No. 7 I/ 42369 , NEMA EW-1-1971	Specification for automatic and semi - Automatic welding equipment with self - Adjusting arcs Migimag Processes Part 1 DC welding generator power source
17	IS 7931 (Part 2) : 1975 Reviewed In : 2019 ISO Dot TA-76/ 72/ E , Document No. 7 I/ 42369 , NEMA EW-1-1971	Specification for automatic and semi - Automatic welding equipment with self-adjusting arcs Mig mag Processes Part 2 transformer - Rectifier power source
18	IS 7931 (Part 3) : 1975 Reviewed In : 2019 ISO Dot TA-76/ 72/ E , Document No. 7 I/ 42369 , NEMA EW-1-1971	Specification for automatic and semi - Automatic welding equipment with self - Adjusting arcs Mig mag Processes Part 3 welding gun and ancillary equipment
19	IS 8804 : 1993 IEC 501 Reviewed In : 2019 IEC Publication 501 (1975) , BS 638 : 1966	Plugs sockets terminal arrangements and welding cable connectors for manual welding equipment - Specification First Revision
20	IS 9604 : 1994 Reviewed In : 2019 Dot : ISO/TC 44.%X (Secretariat -20 1975	Tungsten - Inertgas Tig welding equipment - Specification First Revision